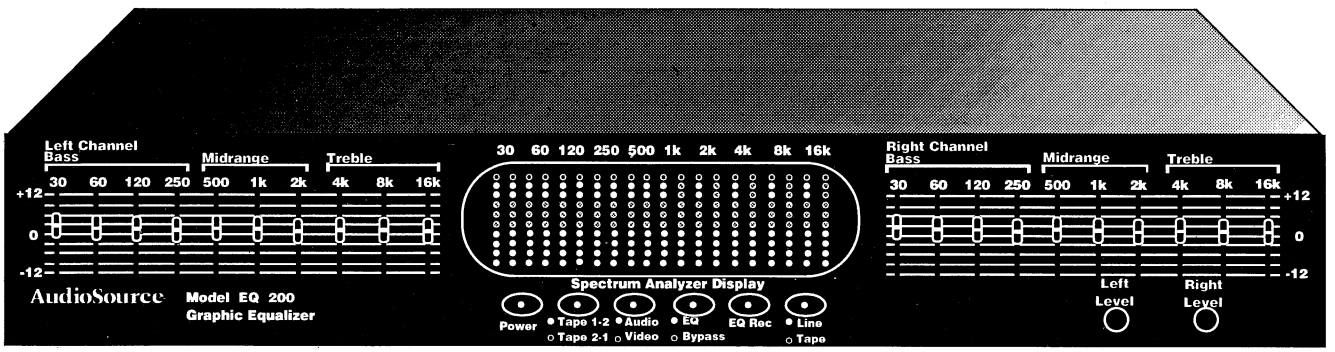
Owner's Manual

AudioSource
EQ 200

Ten-Band Stereo Graphic Equalizer with Spectrum Analyzer Display



Congratulations on your new purchase, and welcome to the AudioSource family of satisfied customers. We trust that you will continue to enjoy the value and quality of your AudioSource EQ 200 Stereo Graphic Equalizer. In order to make sure that you are experiencing the best performance from your unit, please take a few moments to read this manual before you get started. Also, be sure to retain this manual should you need to refer to it in the future.

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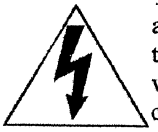
WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION:

RISK OF ELECTRIC SHOCK, DO NOT OPEN



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnatude to constitute a risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION: To reduce the risk of electric shock, do not remove cover (or back); no user servicable parts inside. Refer servicing to qualified service personnel.

CAUTION: "TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT." - "ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND."

Safety Instructions

Read Instructions - All the safety and operating instructions should be read before the appliance is operated.

Retain Instructions - The safety and operating instructions should be adhered to.

Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.

Follow Instructions - All operating and use instructions should be followed.

Water and Moisture - The appliance should not be used near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in situation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power-Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Cleaning - The appliance should be cleaned only as recommended by the manufacturer.

Power Lines - An outdoor antenna should be located away from power lines.

Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Damage Requiring Service - The appliance should be serviced by qualified service personnel when:

A) The power supply cord or the plug has been damaged; or

B) Objects have fallen, or liquid has been spilled into the appliance; or

C) The appliance has been exposed to rain; or

D) The appliance does not appear to operate normally or exhibits a marked change in performance; or

E) The appliance has been dropped, or the enclosure damaged.

Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Product Servicing - In the event your EQ 200 fails to operate properly, please contact AudioSource directly for further assistance, repair, service, or replacement. Please see back cover for address and telephone number.

A Few Words About Graphic Equalizers

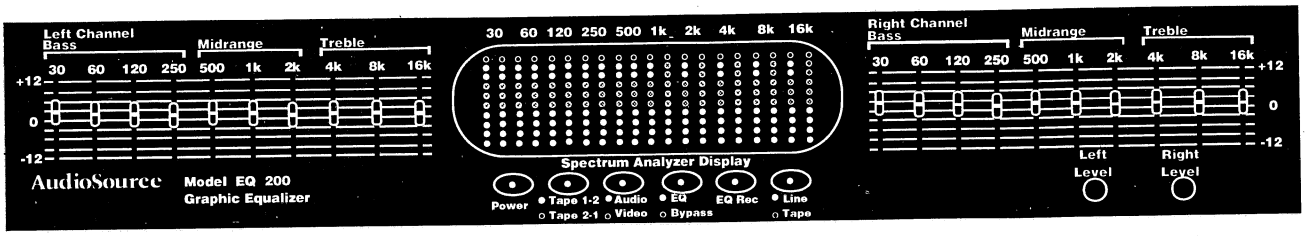
Thank you for choosing this AudioSource EQ 200 Graphic Equalizer. Used correctly, a Graphic Equalizer is a powerful tool for very detailed control over the sound of your speakers, far more than available from simple tone controls. With the EQ 200, you can enhance the sound of older recordings, alter instrumental and vocal balance to suit your own tastes, make "Custom Equalized" recordings, and a multitude of other uses. However, like any tool, excessive or incorrect adjustments can yield very unpleasant results, and can overload your amplifiers and speakers. Improvement of sound quality, particularly in the extreme bass and treble regions, is completely dependent upon the quality of the other equipment you are using in your system. Limited amplifier power and speakers with a limited frequency range are the greatest barriers to achieving accurate, flat response. If you detect any distortion in the bass or treble regions while boosting the EQ 200's sliders in these areas, back off immediately, as you are probably overtaxing either your amplifier or your speakers. Please read this manual before use, and follow our suggestions and basic guidelines for the best sound.

Having said that, be assured that "good sound" is a relative thing... We all have different opinions and tastes - The EQ 200 is designed to allow you to change the sound of your speakers to suit your own musical choices. On the last page of this manual is a chart designed to show you the frequency content and range for a variety of musical instruments. This chart will help you find the proper sliders to adjust to achieve the desired results.

Basic Guidelines

Before adjusting the sliders, it is VERY IMPORTANT to clearly define your objectives. Without this consideration before adjustment takes place, it will be very difficult to attain pleasing results. Carefully listen to your system - ask yourself "What DON'T I like about the sound ?". If the answer is "I want more Bass", you have two ways to accomplish this. Choice #1 - Raise or "Boost" the sliders for the lowest frequencies - on both channels - Left & Right. Choice #2 - lower or "Cut" the sliders on the midrange and higher frequencies. The end result will be the same - You'll have more bass. Conversly, if you'd like to hear more High Frequencies, you have two ways to accomplish this. #1 -"Boost" the sliders for the highest frequencies - on both channels - Left & Right. #2 - "Cut" the sliders of the Midrange and Bass frequencies.

As you can see, there are a variety of ways to accomplish your objectives. Be aware that due to the nature of all equalizer sliders, you will find that movement of any given slider will also have some effect on the setting of the sliders adjacent to either side of it. Experiment - let your ears decide what sounds best, but try to have a clear objective before you begin. One suggestion: avoid the "Boost-Boost Syndrome"... avoid "Boosting" one frequency area too much, by "Cutting" another frequency area. Don't just radically boost everything - it will add noise to the system, and overtax your other components. Subtle, careful equalization will make a huge improvement in the overall sound of your system. Enjoy your EQ 200, and if you have any questions, we are here to help. You can call AudioSource at (800) HELP-115.



Using The Controls

Power

Power : Press this button to activate the power on the EQ 200. The LED will be green to show power is "On". Push the button again to turn "Off" the EQ 200. The LED will be red to show this selection.

Tape 1-2 / Tape 2-1

Tape 1-2/Tape 2-1: This button allows you to make a tape copy or "Dub" between the two cassette decks. Press this button "In" to "Dub" from Tape 1 to Tape 2. The LED will be green to show this selection. Leave this button in the "Out" position to "Dub" from Tape 2 to Tape 1. The LED will be red to show this selection. When the "Line/Tape" switch is "OUT", or in the TAPE position, This "Tape1-2/Tape 2-1" switch will select which tape deck is to be listened to. Leave it "IN" for Tape 1, "OUT" for Tape 2.

Audio / Video

Audio/Video : This button selects between two input sources. Press the Button "IN" to select an Audio input source, such as a C.D. player. The LED will be green to show this selection. Leave the button "OUT" to select a Video input source, such as a V.C.R., or Laserdisc player. The LED will be red to show this selection.
Note: the EQ 200 equalizes the *sound* of these various components. At no time does the EQ 200 alter the picture, and no "Video-Type" connections are included. These inputs will accept any "Line Level" source, such as a CD player, tape deck, laserdisc, VCR, etc.

EQ / Bypass

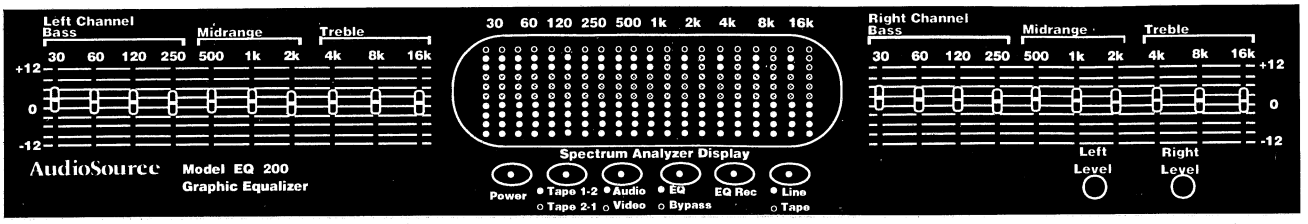
EQ / Bypass : Use this switch to instantly compare the "equalized" and unequalized" sound. Press this button "IN" to hear the result of your equalization curve. The LED will be green to show this selection. When this button is IN, the red LEDs in all twenty sliders will light up. Leave this switch in the "OUT" position to bypass the equalization of the EQ 200. The LED will be red to show this selection, and the red LEDs in the sliders will disappear at this time.

EQ Rec

EQ Rec. : EQ Record. Press this button to make a tape copy with the equalization curve you have just set. The LED will be green to show this selection. This can be useful when making a cassette tape to play in your car. A well-equalized tape can improve the sound from smaller, less expensive car stereo speakers. With this button in the "Off" position, the cassette tape copy will be recorded without equalization. The LED will be red to show this selection.

Line / Tape

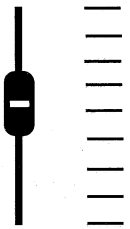
Line / Tape : This button selects between input sources. In the "In" position, the "Line Input" is chosen. The LED will be green to show this selection. Leave this button in the "Out" position to hear the "Tape Input". The LED will be red to show this selection.



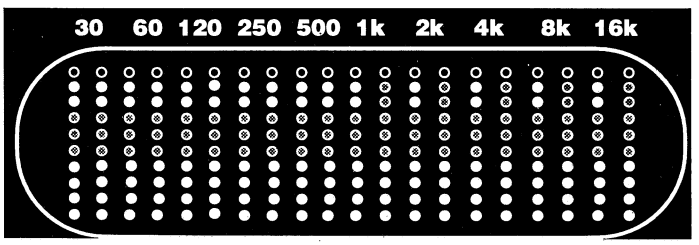
Using The Controls

Left Level, or
Right Level

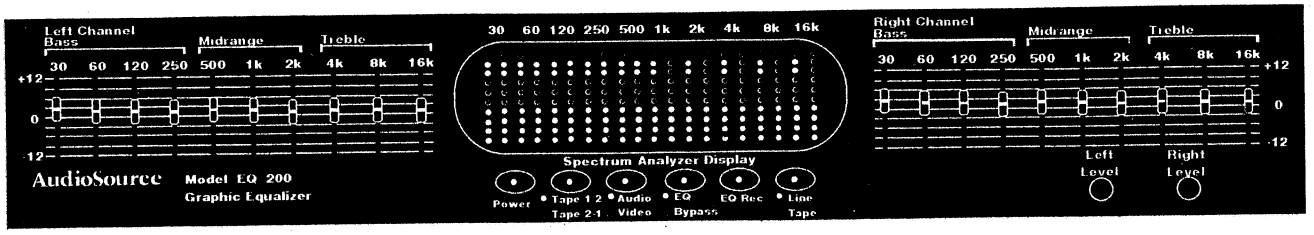
Level Controls: Both left and right channels have a control marked "Level". This controls the level, or volume of each channel. Usually, these controls can be set to their maximum position, but these levels can be reduced if an overly strong input signal causes distortion. Usually, similar adjustments should be made for both channels.



EQ Sliders : Each of these sliders will give 12Db. of "Boost" and 12 dB. of "Cut". There are ten sliders per channel - Ten for the Left channel, and Ten for the Right channel. Looking at the front panel, the sliders that control the lowest frequencies are on the left, with the higher frequencies farther right. Usually, identical adjustments should be made for both channels. These sliders are One Octave apart from one another. This corresponds with the entire range of human hearing. The last page of this owner's manual contains a chart, showing which sliders to adjust to affect the sound of various instruments. For instance, the lowest note of a Bass Guitar is at 42 Hz.. By adjusting the sliders at 30 Hz. and 60 Hz., you can raise or lower the volume of the bass guitar, bass drum, and any other musical instruments that occupy this frequency range. In another instance, the sound of the female vocalist occupies a frequency range from roughly 200 Hz. to 1500 Hz.. By adjusting the sliders within this range, you can change the tonal character of the female voice, and any other musical instruments that occupy this frequency range.



Spectrum Analyzer Display: This provides a visual display of the relative signal levels in each of the EQ Sliders. The Spectrum Analyzer display is divided into ten columns of LED's which correspond to the ten EQ Sliders. You can use this display to assist you in setting your equalizer sliders, as well as to obtain information about the frequency content of the music as you play it through the EQ 200.

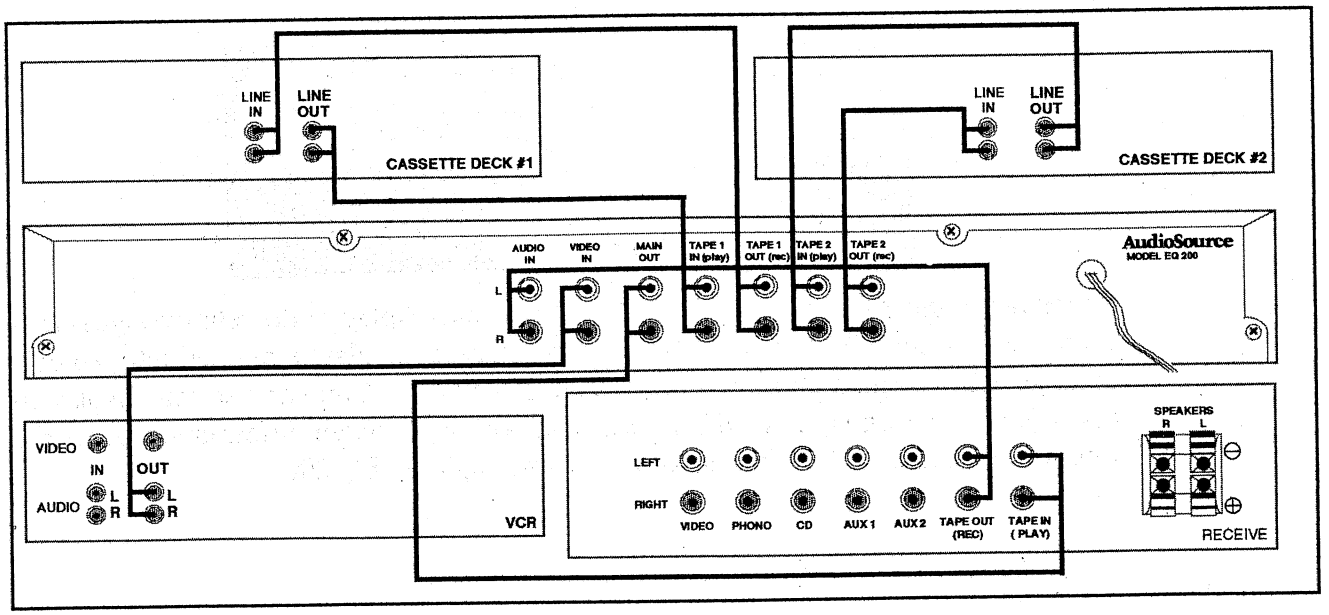


Hooking It All Up

The EQ 200 should be connected through the "Tape Monitor Loop" of you receiver, integrated amplifier, or preamplifier. Since the EQ 200 replaces the tape deck, remember to activate the "Tape Monitor" switch on your receiver, integrated amplifier, or preamplifier - as you would when playing your tape deck. Your tape deck can now be plugged into the back of the EQ 200.

When making or changing connections, it is always wise to unplug the power cords of your components - or at least make sure the power is "Off", so you won't hear any unexpected "pops" during connection of cables.

1.Connect the **Tape Out** or **Tape Record** jacks (different components use different terminology) on the back of your receiver/integrated amplifier/preamplifier to the **Audio In** jacks of the EQ 200.
2. Connect the **Main Out** jacks of the EQ 200 into the **Tape In** or **Tape Monitor** jacks of your receiver/integrated amplifier. this completes the "loop".
3. Always make sure to engage the **"Tape Monitor"** button on your receiver, no matter which input source you want to listen to. This allows the "Equalized" signal to be heard on any source material.
4. You can connect two tape decks to the EQ 200. For Tape 1, connect the **Line Out** or **Record** jacks on your tape deck to the **Tape 1 IN (play)** jacks on the EQ 200. Next, connect the **Line Out** or **Monitor** jacks on your tape deck to the **Tape 1 IN (play)** jacks on the EQ 200. For Tape 2, repeat this step using the **Tape 2 Rec** and **Tape 2 play** jacks on the EQ 200.
5. You may use the **"Video In"** jacks on the EQ 200 to connect any high output source, such as a CD player, tape deck, or the *audio* outputs of a VCR or laserdisc.

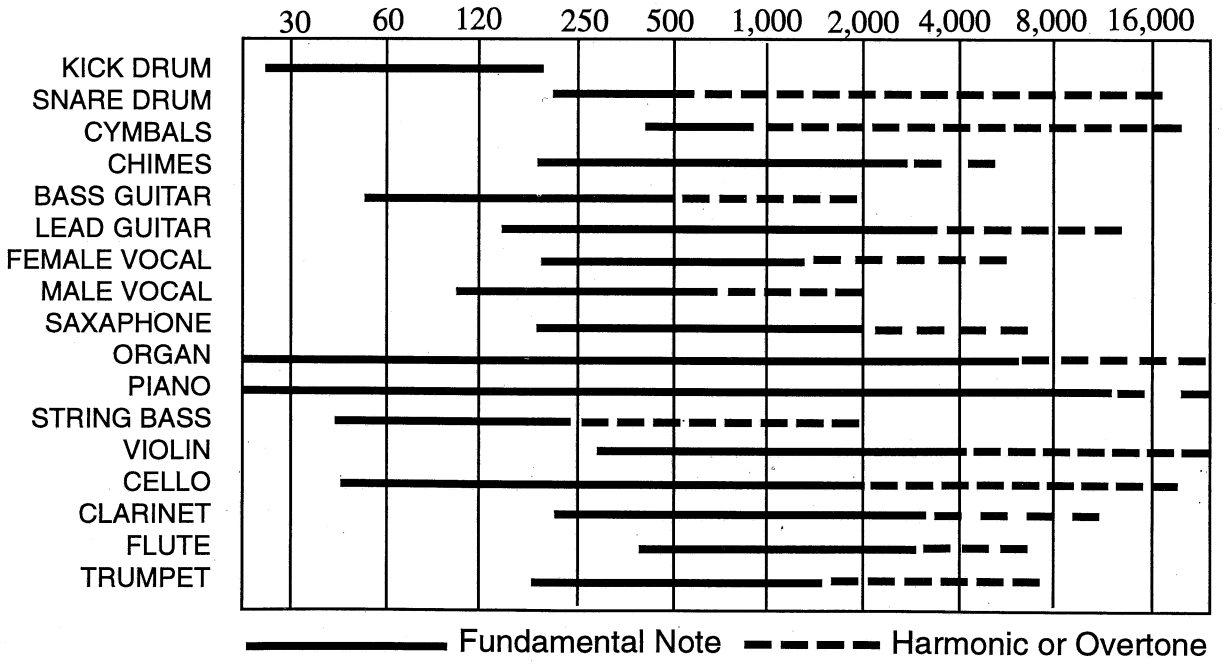


AudioSource®

EQ 200 Specifications

Frequency Response	10Hz -50kHz + or - 1 dB
Harmonic Distortion	0.03% of nominal output
Signal to Noise Ratio	- 95 dB
Input Impedance	100 k Ohms
Output Impedance	600 Ohms
Load Impedance	10 k Ohms or more
Inputs	Audio,Video, Tape 1, Tape 2
Outputs	Main , Tape 1,Tape 2
Control Center Points	30 Hz, 60 Hz, 120 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz
Control Range	+ or - 12 dB
Dimensions	16 1/2" (W) x 3 1/2" (H) x 11 1/4" (D)
Weight (without packaging)	8 lbs.
Power Consumption	14 Watts

The chart below will help you identify which sliders on the GRAPHIC EQUALIZER Section will most affect the sound and balance of particular instruments by illustrating where they lie in the overall sonic spectrum



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